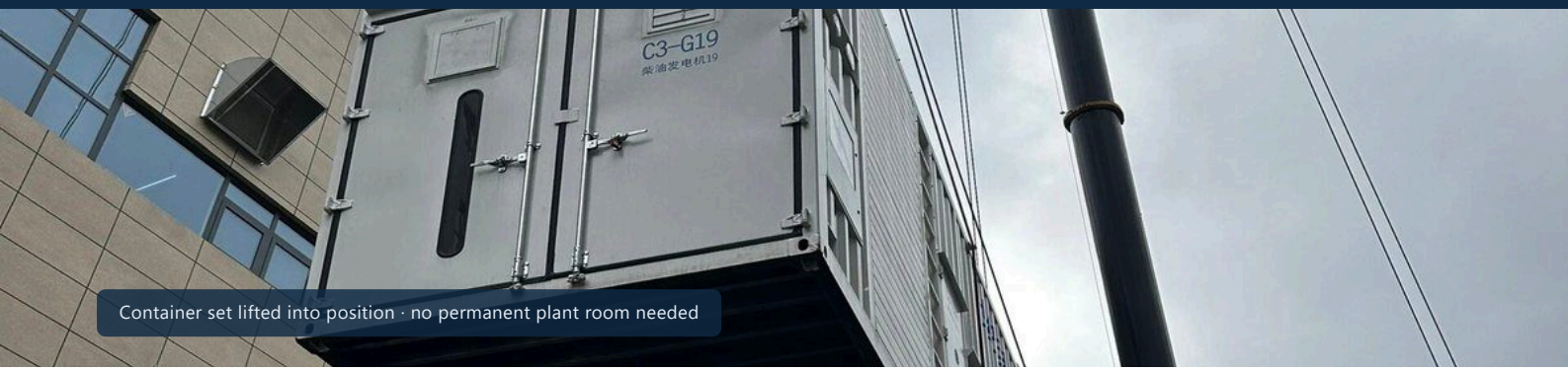


Container set lifted into position · no permanent plant room needed

DATA CENTRES · OUTAGE, OVERHAUL & EXPANSION

Data centre backup power: the UPS step sets the size

N+1 generation still fails together. A mobile unit is the independent source that shares no fuel path, control system or safety boundary with the campus.

Total kW is not the constraint — the step load is. 1 MW of IT at PUE 1.4 needs 1,600–2,000 kW of mobile generation, because the rectifiers can jump from 0 to 80% in 100 ms. Size at 1.4–1.6× the UPS rating unless the UPS has a confirmed walk-in ramp.

SIZING AGAINST UPS STEP LOAD

UPS rating	Rectifier load	Set without ramp	Set with walk-in
400 kVA	360 kW	500–630 kW	400–500 kW
800 kVA	720 kW	1,000–1,250 kW	800–1,000 kW
1,200 kVA	1,080 kW	1,600–2,000 kW	1,250–1,600 kW
2 × 800 kVA	1,440 kW	2 × 1,000 kW	2 × 800 kW
2 × 1,000 kVA	1,800 kW	2,500–3,000 kW	2,000–2,500 kW

WHAT DECIDES THE PROJECT

- **Harmonics.** Six-pulse rectifiers give 25–30% THDi; derate to 0.85 above 20% and 0.70–0.75 above 30%. Specify PMG or AREP excitation.
- **10 kV connection.** Three actions before energising: phase check, protection coordination, anti-islanding with back-feed interlock.
- **Chiller plant.** 30–40% of site load; delay it 30–60 s in the BMS so the start does not coincide with the UPS step.
- **Cable.** At 1 MW, LV needs 4 × (3 × 240) mm² at 3–4% drop per 100 m; 10 kV needs 3 × 95 mm² at under 0.5%.

1.4–1.6×
UPS rating without a walk-in ramp

0.85
derating factor at 25–30% THDi

<0.5%
volt drop per 100 m on 10 kV

Set and controls

Engine and alternator for mobile duty, deep-sea controller, full-load test before shipment.

On-board electrical

Switchgear, cable reel, quick connectors, earthing kit, outriggers.

Documents

English manual, wiring diagram, load-test report, spare parts list.

TALK TO AN ENGINEER, NOT A CALL CENTRE

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Liuzhou, Guangxi, China · FOB Qinzhou / Fangchenggang / Shenzhen
50 / 60 Hz · CE configurations on request · English manuals and load-test report

Full page & specs

Ratings are engineering ranges for discussion; final sizing follows the UPS manufacturer generator-compatibility table and a site step test. Prices on request, FOB China, valid 30 days, excluding freight and duties.